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# A FINANCIAL PERFORMANCE OF SELECTED POWER COMPANIES OF INDIA

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## ABSTRACT

One of the most essential input components for the country's economic development is electricity. In India, there is a significant and growing need for power, which is developing in tandem with the country's corporate and industrial growth. The Indian electricity sector has reacted positively and made great headway in closing the demand-supply gap. The Indian electricity sector has one of the biggest development potentials in the world. However, there are still obstacles to overcome, such as generating more power and generating and distributing power effectively and at a low cost. The primary goal of this study is to look at the financial performance of NTPC and GUVNL during a three-year period from 2018-19 to 2020-21 in order to assess their financial strength.

**KEYWORDS:** Power, NTPC, GUVNL, Financial Performance.

**INTRODUCTION:**

For a country's economic progress, infrastructure has become critical. Because it is the fundamental structural foundation for it. It is even more important in the case of developing countries, as their economic development, which has been neglected for a long time for various reasons, is heavily reliant on the development of an effective and efficient infrastructure that can respond to demand and provide the required services quickly and efficiently. Effective in terms of providing the essential services in a timely and effective manner. The gold standard for infrastructure development is effective service. Infrastructure services, in turn, increase people's well-being, promote economic growth and productivity, and contribute to improve overall quality of life. As a result, infrastructure has been compared to the wheels of economic activity. Its failure, particularly in critical areas such as power, diminishes productivity and has a significant impact on life quality. There is every reason to conclude that, despite the high cost, infrastructure investments in developing countries have been ineffective, and that the infrastructure has thus failed to provide the services expected of it.

Any country's economic development, regardless of its size, is largely dependent on the development of its electricity sector, which is a crucial indicator of the country's overall economic progress. Not only is power fundamental to all home activities, but it is also central to economic development. In fact, it is the driving force behind economic expansion in all sectors, not just agriculture and industry, but also everything else. The success and profitability with which a country controls its power industry is crucial to its economic prosperity. Agriculture, industry, and other key economic sectors rely on the consistent and uninterrupted supply of appropriate power throughout the year to develop and succeed. Apart from other considerations, the importance of power consumption in a country's economic development can be determined by looking at its power consumption. When power consumption across all sectors rises, the index of eco-development as a measure of progress rises as well. Typically, the relationship between electricity use and economic growth is used to gauge progress.

Electricity output is a fundamental measure of a country's size and level of development in all areas. Some countries export a huge amount of electricity, while others import a large amount of it. The agricultural industry in India accounts for the majority of consumption, notwithstanding its low revenue rate. Expanding power supply to fulfil the rising demand of an increasingly urbanised Indian economy while avoiding unacceptably high costs is a big challenge. The consumption of energy in general, and access to electricity in particular, determines people's standard of living. It is a crucial aspect on which policymakers must concentrate their efforts and focus their attention. In terms of energy production and consumption per capita, India lags behind several other countries throughout the world. (2011, Fatima N)

**Power Scenario in India:**

In nearly every sector of action, power has become significant and indispensable. Many different types of customers use it. Electricity powers a plethora of devices, not only home ones. The use of power in industry knows no limitations. Different types of machinery that run on electricity are used in big, medium, and small-scale enterprises that have been major consumers of electricity, and power is necessary to run computers and robots. It is now possible to contact and speak with anyone, anywhere in the universe, via telephone, internet, e-mail, e-commerce, video conferencing, and other means. Due to the advancement of current communication methods, distance between locations is no longer significant. Satellites that support all of these communication channels are managed from an earth station using both conventional and non-conventional power technologies. People's rising living standards contribute to increased energy consumption to fulfil various comforts via energy-intensive gadgets, such as electrical appliances, air conditioners, and other similar devices. However, India's energy production status has been a match for diverse consumer groups' power demand. A. Muthumone (Muthumone, 2008)

The power sector's production efforts have not increased in a manner that is commensurate with and beneficial to people's consumption levels and standard of living. The gap between power generation and demand for power is always expanding. Despite the fact that there is a clear link between income and energy use, power development policies have not been successful thus far. Continuous energy production and delivery provides a push for economic progress. Energy consumption and national GDP are intertwined, and growing countries like India require a strong link between appropriate energy supply and economic growth. It is also obvious that economic development and the development of the power sector are inextricably linked and interdependent. In both cross-sectional time series data and power sector statistics, there is a strong correlation between energy consumption and national income, implying that insufficient power generation and supply could stifle the country's economic progress.

**LITERATURE REVIEW:**

Singh and Srivastava (2004) proposed the Transmission System Operator concept, which allows the operation and ownership of the grid to be combined into a single organisation responsible for transmission network expansion, providing unrestricted open access to power to all market participants. Khurana and Banerjee (2015) used the Analytical Hierarchy Process (AHP1) method to build a performance index that looked at the efficiency and productivity of various parts of the power sector value chain in terms of financial and operational performance. Yadav et al. (2009) conducted an inter-country performance review of 19 developing countries, including India, and found that India ranked seventh out of the 19 countries analysed, highlighting the need of excellent management practises. Malik et al. (2012) looked at the impact and efficiency of unbundling the generation segment, and found that unbundling firms improved plant availability by 4.6 percent and reduced forced outages by 2.9 percent.

Shanmugam and Kulshreshtha (2015) used the SFA approach to measure the technical efficiency of thermal power plants and found that the western region is more efficient than the other. Nag conducted the first DEA analysis on thermal power plants in India's power sector (2006). In terms of productivity, Behera et al. (2011) looked at thermal power plants and the influence of capacity addition on productivity. Shrivastava et al. (2012), on the other hand, examined the problem of insufficient generating capacity expansions resulting in a scarcity of available capacity. The topic of sustainability and climate change mitigation imperatives was originally articulated by Vazhayil and Balasubramanian in their performance efficiency evaluation using DEA methodology for the Indian power sector (2012). To estimate total factor productivity, Singh et al. (2013) used a DEA-based MPI4 technique to analyse the productivity shift in Indian coal-fired electricity generation (TFP). Vyas conducted the first research of its sort in India, comparing the performance of commercial and public power producing businesses (2015). The only study found in the hydropower generation section was Thakur and Jain (2009), who analysed the efficiency of 34 hydropower plants and highlighted a few inefficient power plants that needed to be improved.

Thakur (2005) conducted the first study to evaluate utility performance and benchmark in the context using the DEA technique. Thakur (2006) conducted another pioneering work on productivity analysis of state-owned electric utilities using MPI for the same sample utilities. Furthermore, Meenakumari et al. (2010) investigated the productivity improvement of state-owned utilities and found that only 60% of them have increased productivity. Meenakumari and Kamaraj (2008) used correlation and regression analysis, the first of its type in India, to investigate the isotonicity of the variables under investigation, selecting only positively correlated input and output variables for the study. Similarly, Jain et al. (2010) investigated utilities in terms of cost factors such as operations and maintenance, administrative, and general costs as input parameters for measuring performance efficiency and proposed that utilities be unbundled to improve performance. Yadav et al. (2013) investigated Uttarakhand distribution businesses, taking into account the geography of the distribution areas, and conducted a sensitivity analysis using reliability indices, recommending restructuring as a feasible strategy for performance improvement. The huge rising losses in PDUs were explored by Pargal and Banerjee (2014), who calculated that the losses accounted for around 17 percent of India's gross fiscal deficit and 1% of GDP.

Saxena et al. (2015) conducted the first study on NSE-listed firms in the Oil, Gas, and Power sector, attempting to benchmark inefficient units and suggesting targets to improve performance efficiency of 24 organisations. A more thorough appraisal of performance The Ministry of Power introduced the Integrated Rating Methodology (IRM) in 2013. It is used to incentivize or disincentivize PDUs in order to improve overall operational and financial performance. Many parameters are covered by the technique, which are categorised as operational, reforms, regulatory, and financial (MoP, 2017).

**RESEARCH OBJECTIVE:**

To analyse the financial performance of selected 2 power companies

**Sample Size:**

In this study researcher has taken two power companies:

1. NTPC (National Thermal Power Corporation Limited)
2. GUVNL (Gujarat Urja Vikas Nigam Limited)

**Period of the Study:**

Financial data for the year 2018-19 to 2020-21 have been analysed in this study.

**Data Analysis Techniques:**

Ratio analysis and ANOVA testing has been used in this study to analyse the financial performance of selected 2 power companies of India.

**DATA ANALYSIS:**

**1. Net Profit Margin:**

| Net Profit Margin | | | |
|---|---|---|---|
| **Company** | **2020-21** | **2019-20** | **2018-19** |
| NTPC | 13.87 | 10.35 | 13.01 |
| GUVNL | 3.81 | 2.89 | 1.95 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Variation** | **SS** | **df** | **MS** | **F** | **P-value** | **F crit** |
| Between Groups | 136.0684 | 1 | 136.0684 | 64.28437 | 0.001313 | 7.708647 |
| Within Groups | 8.466652 | 4 | 2.116663 | | | |
| Total | 144.535 | 5 | | | | |

$H_0$1 = There is no significant difference in Net Profit Margin Ratio between selected 2 power companies.

$H_1$1 = There is significant difference in Net Profit Margin Ratio between selected 2 power companies

Thus, Fcal>Ftab and p-value is smaller than specified α of 0.05.

So, $H_0$ is rejected and $H_1$ is accepted and it is concluded that there is significant difference in Net Profit Margin Ratio between selected 2 power companies.

**2. Return on Assets:**

| Return on Assets | | | |
|---|---|---|---|
| **Company** | **2020-21** | **2019-20** | **2018-19** |
| NTPC | 4.01 | 3.08 | 4.03 |
| GUVNL | 2.14 | 3.98 | 3.18 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Variation** | **SS** | **df** | **MS** | **F** | **P-value** | **F crit** |
| Between Groups | 0.550257 | 1 | 0.550257 | 0.963183 | 0.381953 | 7.708647 |
| Within Groups | 2.28516 | 4 | 0.57129 | | | |
| Total | 2.835416 | 5 | | | | |

$H_0$2 = There is no significant difference in Return on Assets Ratio between selected 2 power companies.

$H_1$2 = There is significant difference in Return on Assets Ratio between selected 2 power companies.

Thus, Fcal<Ftab and p-value is higher than specified α of 0.05.

So, $H_0$ is accepted and it is concluded that there is no significant difference in Return on Assets Ratio between selected 2 power companies.

**3. Current Ratio:**

| Current Ratio | | | |
|---|---|---|---|
| **Company** | **2020-21** | **2019-20** | **2018-19** |
| NTPC | 0.97 | 1.01 | 0.79 |
| GUVNL | 0.72 | 0.88 | 0.82 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| **Source of Variation** | **SS** | **df** | **MS** | **F** | **P-value** | **F crit** |
| Between Groups | 0.020262 | 1 | 0.020262 | 1.94971 | 0.235121 | 7.708647 |
| Within Groups | 0.04157 | 4 | 0.010392 | | | |
| Total | 0.061832 | 5 | | | | |

$H_0$3 = There is no significant difference in Current Ratio between selected 2 power companies.

$H_1$3 = There is significant difference in Current Ratio between selected 2 power companies.

Thus, Fcal<Ftab and p-value is higher than specified α of 0.05.

So, $H_0$ is accepted and it is concluded that there is no significant difference in Current Ratio between selected 2 power companies.

**CONCLUSION:**

The power supply and distribution component of the power sector is a critical link in the electricity supply chain since it provides last-mile connectivity to all customers while also producing money for the power sector. As a result, the distribution of power is an essential component for a long-term future. The electricity industry has undergone various structural and regulatory changes in India over the last two decades, including the unbundling of state entities, the establishment of independent regulatory bodies, and the implementation of reforms to improve the performance of power distribution utilities. However, for years and years, the performance of distribution utilities has been a major source of concern (Khurana and Banerjee, 2015). Consultants, advisors, practitioners, and academicians take note of this and focus on improving distribution segment research and developing strategic solutions for the distribution sector's entire turnaround. To turn around the weak distribution business, strategic due diligence and more stringent reforms must be applied. As a result of the study, it can be stated that there is an urgent need to implement effective and efficient policy reforms and regulatory frameworks for the operational and financial turnaround of the distribution sector, particularly through the use of DEA methodology. Because the study was confined to the literature found in a few internet databases, there may be other undiscovered publications that can be used in future power sector research.

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